



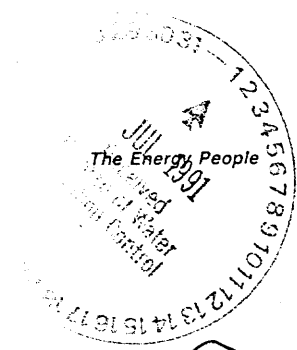
Utah Fuel Company
A SUBSIDIARY OF THE COASTAL CORPORATION

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DIVISION OF
OIL GAS & MINING
June 27, 1991

Harry & Steve 7 Feb



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Donald A. Hilden Ph.D., Manager
Permitting & Compliance Section
Bureau of Water Pollution Control
Department of Health
288 North 1460 West
P.O. Box 16690
Salt Lake City, Utah 84116-0690

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Dear Mr. Hilden:

I appreciate the opportunity we had to meet with Harry Campbell and Steve McNeil of your office on Friday, May 31st. I would like to take this opportunity in this letter to review with you three things: (1) What we perceive to be causing the high TDS and sulfate levels in our discharge water; (2) What we have done to date to help reduce these high levels; and (3) What we plan to do in the future to continue to reduce TDS and sulfate levels and bring the levels into compliance.

Skyline Mines have been in operation for approximately ten years now. Until recently there has been a slight increase in TDS levels. These increases were primarily from sulfate, magnesium and calcium ions; and we had not exceeded our permit limitations, nor were we anticipating an exceedance.

During the first several years of operations we emphasized development mining to establish longwall panels. In September of 1986 we started to mine the first series of longwall panels and finished mining this longwall area in August of 1989. The decision was then made to seal this area and convert it into a large underground sump which would provide ample settling time to meet TSS limitations, and we could then apply for a direct discharge into Eccles Creek without needing further treatment in our surface sedimentation pond.

The water in the abandoned and sealed longwall section accumulated until we could start pumping it in October 1990. We anticipated that this water would be of good quality. However, shortly after starting to pump we had a dramatic increase in TDS values in our discharge water at the NPDES discharge point. We immediately began sampling water sources throughout both Mines No. 1 and 3. We found high TDS values coming from basically two areas: 1) The abandoned longwall section in Mine No. 3 and the active longwall section in Mine No. 1. The major constituents of the TDS values were calcium, magnesium and sulfates. We have been using gypsum rock dust since early in the mine life because of its "whiter" color and flowability characteristics.

A non-combustible dust approved by the Federal Mine Safety and Health Administration of the Dept. of Labor is required to be added throughout our mine to maintain the coal dust which may accumulate on the underground surfaces inert. Finely ground gypsum is approved for this purpose. As you are aware gypsum is basically calcium and magnesium sulfates. We talked with our rock dust suppliers and were told that gypsum in the anhydrite form is not very soluble and should not cause a water quality problem. We started testing every product being used in the mine to determine if any of them could be causing the problem. We found none.

We then turned our attention back to our rock dust which contained up to 40% anhydrite gypsum. We found that the leachate from 50 grams of rock dust soaked in 100 ML of de-ionized water for 10 minutes contained 800-900 ppm of sulfates. We contacted our rock dust supplier and requested that gypsum not be added to our rock dust. We established a maximum limit of 50 ppm of sulfate for a rock dust product to be acceptable. Although the supplier was feeding straight limestone into his mill, sufficient contamination in the milling process was occurring and they could not meet the 50 ppm sulfate limit. Every load of rock dust received was tested before it was accepted or rejected. We started testing rock dust from other suppliers from the intermountain area. A new supplier was selected in early March of 1991. The rock dust from this supplier contains 0 ppm of sulfates. We are still and will continue to randomly sample our truckloads of rock dust for sulfate content.

We feel confident that the gypsum added to our rock dust was the major contributor to our TDS and sulfate problem. Since we have changed to a non-gypsum rock dust, TDS and sulfate values have stopped climbing; however, we are still above our permit limitation due to the large volume of gypsum dust previously put in the mines.

In order to help bring us back into compliance we are in the process of separating the high TDS water coming from our active longwall section in Mine No. 1. This high TDS water will be collected and pumped back into our mine process water system where it will be used for dust suppression. We expect this piping change to be completed within the next two weeks. This action alone should bring our TDS and sulfate values into compliance on our biweekly samples.

In late July or early August of this year we will be starting up a second longwall section. It will be located in Mine No. 3. We are planning to pump the high TDS and sulfate water from the mined out longwall section in this mine and using it for dust suppression on the new longwall section. Water which is used for dust suppression is basically absorbed by the coal particles and is shipped out with the coal.

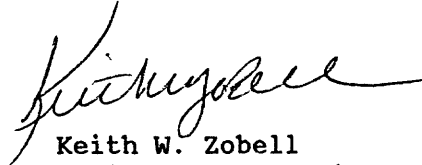
Although reusing the high TDS and sulfate water in Mines No. 1 & 3 will significantly reduce our overall TDS and sulfate values, we will need to continue to monitor these values as we feel that the sulfate will persist for some time. Since we have changed our rock dust product, we are not continuing to add to our problem; however, we are finding that the gypsum is slow to

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dissolve. We feel that over time a slow decline in TDS and sulfate values will occur. Until these values reach a level where they are no longer a concern to both your Department and to us, we will continue to closely monitor these values and look for additional ways to further correct the problem.

Again, we appreciate meeting with your staff and the professional suggestions that they made. We will periodically keep your office informed of our current status and of any new developments.

Sincerely,



Keith W. Zobell
Environmental Engineer

KWZ:lm